

# *Hydrobiologia*

**Editor-in-chief: K. F. Vaas, Ierseke**

## **Editorial Board**

**Sv. Björk Lund; A. F. de Bont, Kinshasa; T. V. Desikachary,  
Madras; H. B. N. Hynes, Waterloo, Ont.  
T. T. Macan, Ambleside; G. Marlier, Bruxelles  
C. H. Mortimer, Milwaukee; R. Ryhänen, Helsinki  
Vl. Sládeček, Praha; W. R. Taylor, Ann Arbor; L. Tonolli,  
Pallanza; M. Uéno, Kyoto**

**VOLUME 45**

**1974**

490  
49  
**Dr. W. Junk b.v. Publishers      The Hague The Netherlands**



# VOLUMEN

Fasc. 1	Pag. 1—156, edit.: 15-7-1974
Fasc. 2—3	Pag. 157—344, edit.: 1-10-1974
Fasc. 4	Pag. 345—550, edit.: 2-12-1974

ARMITAGE, B. J., 441	LUNDQUIST, S., 509, 527
BALAKRISHNAN NAIR, N., 239	MADSEN, B. L., 169
BEAVER, O., 137	MALANCHUK, J. L., 405
BENFIELD, E. F., 431	MCMAHON, R. F., 391
BORGHOUTS, H. C., 548	MILBRINK, G., 509, 527
BOYD, C. E., 345	MUNAWAR, M., 1
BREZONIK, P. L., 467	OSBORNE, J. A., 249
BROWN, J. M. A., 93, 157	PEELEN, R., 117
CAIRNS, JR., J., 431	PETR, R., 303
CHAPMAN, V. J., 93, 157	POLK, P., 423
CHIOU, C. J. 345	PRAMSTEN, H., 509, 527
DANNEEL, I., 39	REYNOLDS, J. D., 489
DEAN, J. M., 33	RUSSEL-HUNTER, W. D., 391
DHANAPATHI, M. V. S. S. S., 357	SCHAIL, H. G., 543
FEEN, P. J. VAN DER, 549	SCHROEVERS, P. J., 340
FOX, J. L., 467	SHERBERGER, F. F., 177
GEORGE, E. L., 239	SIMMONS, JR., G. M., 441
GILBERT, E., 185	SLADECEK, V., 547
GRUENDLING, G. K., 405	STARLING, M. B., 93, 157
HANSMANN, E. W., 185	STRAUSS, R., 217
HAUSPIE, R., 423	THORNTON, K., 261
HENDREY, G. R., 45	VAAAS, K. F., 548
HENDRICKS, A. C., 431	VERVOORT, W., 339, 341
HICKMAN, M., 199	WALLACE, J. B., 177
HINZ, W., 39, 543	WELCH, E. B., 45
HUNTER, R. D., 391	WHITE, J. C., 441
KIDD, D. E., 185	WILHM, J., 261
LEVY, L. W., 217	WOLFF, W. J., 155, 343
LEWIS, D. S. C., 281	YOUNG, J. O., 65, 373

# CONTENTS

M. MUNAWAR: Limnological Studies on Freshwater Ponds of Hyderabad, India IV. The Biocenose, Periodicity and Species Composition of Unicellular and Colonial Phytoplankton in Polluted and Unpolluted Environments. <i>Canada Center for Inland Waters, P.O. Box 5050, Burlington, Ontario, Canada</i> .....	1
J. M. DEAN: The Accumulation of $^{65}\text{Zn}$ and other Radionuclides by Tubificid Worms. <i>Belle W. Baruch Inst. for Marine Biol. and Coastal Res., S. Carolina, Columbia, USA</i> .....	33
I. DANNEEL & W. HINZ: Trockenresistenz dreier Pisidium-Populationen (Bivalvia) in Abhängigkeit von der relativen Luftfeuchtigkeit. Gesamthochschule Duisburg, B.R.D. ....	39
G. R. HENDREY & E. B. WELCH: Phytoplankton Productivity in Findley Lake. <i>Norwegian Inst. for Water Res. Blindern, Oslo 3, Norway</i> .....	45
J. O. YOUNG: Life-cycles of some Invertebrate Taxa in a small Pond together with Changes in their Numbers over a Period of Three Years. <i>Dept. of Zool., Univ. of Liverpool, England</i> .....	65
M. B. STARLING, V. J. CHAPMAN & J. M. A. BROWN: A Contribution to the Biology of <i>Nitella hookeri</i> A.BR. in the Rotorua Lakes, New Zealand. I. Inorganic nutritional requirements. <i>Bot. Dept., Univ. of Auckland, New Zealand</i> .....	93
R. PEELER: Data on Temperature, Oxygen, Sediment and Transparency of the Water in the Northern Part of the Delta Area of the Netherlands between 1961 and 1972. <i>Delta Institute for Hydrobiol. Res., Yerseke, The Netherlands</i> .....	117
O. BEAVER: Laboratory Studies on Competition for Food of the larvae of Some British Sciomyzid Flies (Diptera: Sciomyzidae). II. Inter-Specific Competition. <i>Dept. of Biol., Chiang Mai Univ., Chiang Mai, Thailand</i> .....	137
LIBRI NOVI .....	155
M. B. STARLING, V. J. CHAPMAN & J. M. A. BROWN: A Contribution to the Biology of <i>Nitella hookeri</i> A.BR. in the Rotorua Lakes, New Zealand II. Organic nutrients and physical factors. <i>Bot. Dept., Auckland Univ., New Zealand</i> .....	157
B. L. MADSEN: A Note on the Food of <i>Amphinemoura sulcicollis</i> (Plecoptera). <i>University of Odense, Biol. Inst., Odense, Denmark</i> .....	169
J. BRUCE WALLACE & FRED F. SHERBERGER: The Larval Retreat and Feeding Net of <i>Macronema carolina</i> BANKS (Trichoptera: Hydropsychidae). <i>Univ. of Georgia, Athens, Georgia 30602, USA</i> .....	177
E. W. HANSMANN, D. E. KIDD & E. GILBERT: Man's Impact on a Newly Formed Reservoir. <i>Univ. of New Mexico, Dept. of Biol., New Mexico 87108</i> .....	185
M. HICKMAN: Effects of the Discharge of Thermal Effluent from a Power Station on Lake Wabamun, Alberta, Canada. The epipelic and epipsamic algal communities. <i>Univ. of Alberta Edmonton, Dept. of Bot., Edmonton, USA</i> .....	199
L. WALTER LÉVY & R. STRAUSS: Recherches sur la Précipitation des Carbonates Alcalino-terreux chez les Characées. <i>Lab. de Chimie minérale, Université de Caen, 14-Caen, France</i> .....	217
E. L. GEORGE & N. BALAKRISHNAN NAIR: The Growth Rates of the Estuarine Mollusc <i>Musculista arcuata</i> YAMAMOTO and HABE (Bivalvia: Mytilidae). <i>Dept. of Fisheries, Government of Kerala, T.C. 729/12, Thycad, P.O. Trivandrum-14, S. India</i> .....	239



J. A. OSBORNE: A Test of a Model for Estimating Production in the Sea. Florida Technol. Univ. Orlando, Dept. of Biol. Sciences, Orlando, Florida 32816, USA .....	249
K. THORNTON & J. WILHM: The Effects of pH, Phenol and Sodium Chloride on Survival and Caloric, Lipid, and Nitrogen Content of a Laboratory Population of <i>Chironomus attenuatus</i> (WALK.). Dept. of Biol., Bowling Green State Univ., Bowling Green, Ohio, USA. ....	261
D. S. C. LEWIS: The Effects of the Formation of Lake Kainji (Nigeria) upon the Indigenous Fish Population. Ministry of Agric. Fisheries Dept., P.O. Box 206, Zomba, Malawi .....	281
T. PETR: Distribution, abundance and food of commercial fish in the Black Volta and the Volta Man-made Lake in Ghana during the filling period (1964—1968). II. Characidae. Dept. of Zool., Monash Univ., Clayton, 3168 Vic., Australia .....	303
LIBRI NOVI .....	339
C. J. CHIOU & C. E. BOYD: The Utilization of Phosphorus from Muds by the Phytoplankter, <i>Scenedesmus dimorphus</i> , and the Significance of these Findings to the Practice of Pond Fertilization. Dept. of Fisheries, Auburn Univ. Agric. experiment Station Auburn, Alabama 36830, USA .....	345
M. V. S. S. S. DHANAPATHI: Rotifers from Andhra Pradesh, India-I. Zool. Dept., D. N. Coll., Bhimavaram, Andhra Pradesh, India .....	357
J. O. YOUNG: Seasonal changes in the abundance of Microcrustacea in a small pond. Dept. of Zool., Univ. of Liverpool, England .....	373
R. F. McMAHON, R. DOUGLAS HUNTER & W. D. RUSSEL-HUNTER: Variation in Aufwuchs at Six Freshwater Habitats in Terms of Carbon Biomass and of Carbon: Nitrogen Ratio. Dept. of Biol., Univ. of Texas, Arlington, USA .....	391
G. K. GRUENDLING & J. L. MALANCHUK: Seasonal and Spatial Distribution of Phosphates, Nitrates and Silicates in Lake Champlain, U.S.A. Dept. Biol. Sci., State Univ. of New York, Plattsburgh, N.Y. 12901, U.S.A. ....	405
R. HAUSPIE & P. POLK: Some Observations on Harpacticoid Populations, in Relationship to the Competitive Exclusion Principle. Lab. for Ecol. and Systematics, Free Univ. Brussels, 1050 Brussels, Belgium ....	423
E. F. BENFIELD, A. C. HENDRICKS & J. CAIRNS JR.: Proficiencies of Two Artificial Substrates in Collecting Stream Macroinvertebrates. Dept. of Biol., Virginia Polytechnic Inst. and State Univ., USA .....	431
G. M. SIMMONS JR., B. J. ARMITAGE & J. C. WHITE: An Ecological Evaluation of Heated Water Discharge on Phytoplankton Blooms in the Potomac River. Depts. of Biol., Virginia Polytechnic Inst. and State Univ., Blacksburg, U.S.A. ....	441
P. L. BREZONIK & J. L. FOX: The Limnology of Selected Guatemalan Lakes. Dept. Environmental Engineering Sci., Univ. of Florida, USA..	467
J. D. REYNOLDS: Biology of the Small Pelagic Fishes in the New Volta Lake in Ghana. Part III: Sex and Reproduction. Dept. of Zool., Univ. of British Columbia, Vancouver 8, B.C. Canada .....	489
G. MILBRINK & S. LUNDQUIST & H. PRAMSTEN: On the Horizontal Distribution of the Profundal Bottom Fauna in a Limited Area of Central Lake Mälaren, Sweden. Part I Studies on the Distribution of the Bottom Fauna. Kungl. Fiskeristyrelsen, Sötvattenslaboratoriet, Drottningholm, Sweden .....	509
G. MILBRINK & S. LUNDQUIST & H. PRAMSTEN: On the Horizontal Distribution of the Profundal Bottom Fauna in a Limited Area of Central Lake Mälaren, Sweden. Part II Statistical Treatment of the Data. Inst. of Statistics, Univ. of Stockholm, Sweden. ....	527

H. G. SCHEIL & W. HINZ: Einfluss von $Hg^{2+}$ -Ionen auf die Filtrationsrate von <i>Pisidium casertanum</i> POLI (Bivalvia). <i>Inst. für Humangenetik und Anthropol. der Universität D-4000, Düsseldorf, B.R.D.</i> .....	543
LIBRI NOVI .....	547